

WE CLAIM:

1. A coaxial element wire, comprising:

a center conductor;

an insulation layer, provided around the center conductor, having a thickness of 0.15 mm or less; and

an outer, ribbon-shaped conductor, obtained by pressing a copper or copper alloy round wire into a flat form, without annealing after pressing, the ribbon-shaped conductor being spirally wrapped around said insulation layer.

2. A coaxial element wire, comprising:

a center conductor;

an insulation layer, disposed around said center conductor and in contact therewith, having a thickness of 0.03 mm or more and no greater than 0.15 mm at a portion of the insulation layer where the thickness is smallest; and

an outer conductor, made by:

pressing a copper or copper alloy round wire into a flat form, without annealing after pressing, to thereby provide a ribbon-shaped conductor of a virtually rectangular cross-section with its four corners smoothed, and then

helically wrapping said ribbon-shaped conductor around said insulation layer with one long side thereof facing said insulation layer, wherein a wrapping angle of said ribbon-shaped conductor with respect to an axis of said coaxial element wire is 45 degrees or more.

3. The coaxial element wire according to claim 2, wherein said one or a plurality of ribbon-shaped conductors is wrapped around said insulation layer under a tension of 30% or more of a tensile strength of said ribbon-shaped conductor.

4. A multicore cable, comprising a plurality of said coaxial element wires according to claim 1 provided in a common outer jacket.

5. The multicore cable according to claim 4, wherein outer conductors of the coaxial element wires are in contact.

6. The multicore cable according to claim 4, wherein the plurality of coaxial element wires are twisted together and provided with a common jacket on the outside.

7. An electronic apparatus including at least one multicore cable according to claim 5, disposed at a position where said multicore cable is subjected to mechanical rotation or bending.

8. The coaxial wire element according to claim 1, wherein the outer, ribbon-shaped conductor is spirally wrapped such that adjacent wrappings of the outer conductor butt against one another.

9. The coaxial wire element according to claim 2, wherein the outer conductor is helically wrapped such that adjacent wrappings of the outer conductor butt against one another.

10. The coaxial wire element according to claim 1, wherein the ribbon-shaped conductor is spirally wrapped in a first direction, and wherein a second ribbon-shaped conductor is spirally wrapped in the first direction.

11. The coaxial wire element according to claim 10, wherein the second ribbon-shaped conductor overlaps the first ribbon-shaped conductor.

12. The coaxial wire element according to claim 2, wherein the first ribbon-shaped conductor is helically wrapped in a first direction and a second ribbon-shaped conductor is helically wrapped in the first direction.

13. The coaxial wire element according to claim 12, wherein the second ribbon-shaped conductor overlaps the first ribbon-shaped conductor.

14. The coaxial wire element according to claim 1, wherein the outer conductor includes a first ribbon-shaped conductor spirally wrapped in a first direction and a second ribbon-shaped conductor spirally wrapped in a second direction opposite the first direction.

15. The coaxial wire element according to claim 2, wherein the ribbon-shaped conductor is helically wrapped in a first direction, and a second ribbon-shaped conductor is helically wrapped in a second direction opposite the first direction.

16. A method of making a coaxial element wire, comprising:

providing a center conductor;

providing an insulation layer around the center conductor, wherein the insulation layer has a thickness of 0.15 mm or less;

providing an outer conductor formed by pressing a copper or copper alloy round wire into a flat form, without annealing after pressing, to thereby provide a ribbon-shaped conductor; and

spirally wrapping the ribbon-shaped conductor around the insulation layer.

17. The method according to claim 16, further comprising: assembling a plurality of the coaxial element wires in a common jacket to thereby form a multicore cable.

18. The method according to claim 17, wherein outer conductors of the coaxial element wires are in contact.

19. The method according to claim 16, wherein the spirally wrapping includes wrapping a second ribbon-shaped conductor around the insulation layer.

20. The method according to claim 19, wherein the ribbon-shaped conductors are wrapped around the insulation layer in the same direction.

21. The method according to claim 19, wherein the ribbon-shaped conductors are wrapped around the insulation layer in opposite directions.

22. A method of making a coaxial element wire, comprising:

providing a center conductor;

providing an insulation layer around the center conductor and in contact therewith, wherein a thickness of the insulation layer is 0.03 mm or more and not greater than 0.15 mm at a portion where the thickness is smallest;

providing an outer conductor formed by pressing a copper or copper alloy round wire into a flat form, without annealing after pressing, to thereby provide a ribbon-shaped conductor of a virtually rectangular cross-section with its four corners smoothed; and

helically wrapping one or a plurality of the ribbon-shaped conductors around the insulation layer with one long side thereof facing the insulation layer, wherein a wrapping angle of the ribbon-shaped conductor with respect to an axis of the coaxial element wire is 45 degrees or more.

23. The method according to claim 22, wherein the ribbon-shaped conductor is wrapped around the insulation layer under a tension of 30% or more of a tensile strength of the ribbon-shaped conductor.

24. The method according to claim 22, further comprising: assembling a plurality of the coaxial element wires in a common jacket to thereby form a multicore cable.

25. The method according to claim 22, wherein the helically wrapping includes wrapping a second ribbon-shaped conductor around the insulation layer.

26. The method according to claim 25, wherein the ribbon-shaped conductors are wrapped around the insulation layer in the same direction.

27. The method according to claim 25 wherein the ribbon-shaped conductors are wrapped around the insulation layer in opposite directions.